

Remarks

On Gold

by

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of

Charleston South Carolina.

1807-

No 20

Memoranda

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James M. Smith

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The subject of cold used as a remedy in disease, has of late excited considerable attention in the medical world.

The question whether the effect of this noble remedy be caused by a stimulating or sedative power, from a tendency to establish principles on which its use should be regulated, has an equal claim to attention & interest.

To consider this question is the intention of the following piece. In doing this we shall mention a few of the principal arguments and facts used on either side, attempt to contrast them, and thence draw our conclusion. —

Previous however to immediately entering on the subject, it would not be improper to explain myself as to the nature of Cold. Cold is certainly a negative

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negative quality, and cannot therefore be said to commence at any fixed point. This is proven by the common experiment of making the same temperature appear hot or cold to the same body according to the different circumstances under which it had previously laboured.

Thus suppose the mercury at  $80^{\circ}$  Fahrenheit and suddenly reduced to  $60^{\circ}$ . the sensation of cold would be ~~evident~~ felt. Again, suppose the mercury at  $40^{\circ}$  F suddenly elevated to  $60^{\circ}$ . the opposite sensation, would be the effect.

We shall commence, first, with the effects of intense cold upon the human body. These are languor, indisposition to motion and so great a desire to sleep that even the fear of certain death cannot prevent indulging. In explaining these phenomena, the advocates for the stimulant doctrine suppose the action of cold

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similar to that of opium, brandy & other stimuli, which  
when used to excess induce the same symptoms. To this  
explanation we cannot readily assent when we consider  
the effects of cold water upon the system generally, & the  
pulse. From Dr. Currie's valuable publication on water,  
we quote the following illustrative fact. "If the affusion  
of cold water on the surface of the body be used during  
the cold stage of the paroxysm of fever, the respiration is  
nearly suspended; the pulse becomes fluttering, feeble,  
& of an incalculable frequency, the surface & extremities  
become doubly cold and shrivelled and the patient seems  
to struggle with the pangs of instant dissolution. I  
have no doubt from what I have observed, that in such  
circumstances, the repeated affusion of a few buckets of  
cold water would extinguish life."

From the above striking fact I think it will appear  
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evident, that the effects of cold instead of partaking of a stimulant nature, is as debilitating an agent as we can use. —

In order to prove more particularly its effects on the pulse the following experiment from Dr. Huxley's treatise on cold will suffice: it was made upon two Irish porters; both (he says) were strong muscular men, & both in the vigour of life, being little more than thirty years old. It was thought that they might without inconvenience bear immersion without muscular strength. For a longer period than had been submitted to in any of the instances above cited. The result was decisive and satisfactory. In the first, who appeared the strongest of the two, the pulse was reduced in four minutes 12 strokes, in ten minutes 14 strokes, and scarcely perceptible; in about three minutes more, the pulse was nearly obliterated; only twelve pulsations & those exceedingly faint could be made out in the space of half a minute. The other case was of the same nature & equally conclusive.

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It may be urged however that in most of the experiments made with cold water, the pulse is considerably increased in frequency; nay, that in most of the experiments made by the Author just quoted, this was the result; but it ought also to be observed, that the pulse in these instances is very much diminished in force & fulness. This increase then I conceive tends rather to detract from, than add to the stimulant doctrine.

Secondly. It has been common to notice the effects produced on those persons who inhabit very northern latitudes. We think this argument one of the pillars of the sensitive doctrine, and has been less satisfactorily answered by the advocates of the opposite opinion than any other. The stature of the Laplander, we are told, is smaller and their corporeal and mental endowments inferior to the inhabitants of more temperate regions. The heart of a Greenland (says professor Blumenbach) when in perfect health

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health, does not pulsate oftener than from thirty to forty times in a minute.

Thirdly. The increased defluxion from the nose which an exposure to a cold atmosphere always occasions, we are told, proves cold a stimulus; for in order (it is contended) to secrete more profusely the vessels must take on a stronger action, this action can only be produced by a stimulus, which stimulus in this instance is evidently cold. That cold is the remote cause of this increased secretion we readily grant, but that the phenomena <sup>are</sup> capable of a different solution we think evident. The cold in this instance (according to our doctrine) debilitates the part by abstracting heat, and, of course, the excitability is very much accumulated; this excitability so accumulated is capable of being strongly acted upon by a very moderate stimulus. — heat, always tending to an equilibrium, rushes from the parts contiguous, & is a sufficient stimulus under these circumstances

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Thus would we explain the many instances of increased action which the application of cold produces, for we grant that cold under certain circumstances and modes of application may be made to produce stimulating effects.

Fourthly. We will now notice some of the rules laid down for the application of cold to the diseased system.

Practical writers on this subject, are careful to warn us of the impropriety of using cold affusions during the cold fit of fevers, on account of the dangerous sinking of the pulse and consequent debility. Now, if cold be a stimulus, why would not these affusions tend rather to brace the system as bark & other tonics or stimulants would?

On the contrary when used during the hot stage, when the arterial action is great and the system in a highly excited state, cold affusions are of infinite service. Dr.

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with equal candour and correctness mentions a striking case of a patient in the cold stage. "In this state (he says) urine was dashed over him as usual, but not with the usual happy effects; his breathing was for some minutes almost suspended; his pulse at the wrist was not to be felt; the pulsations of the heart were feeble and fluttering, a deadly coldness spread over the surface; and when the respiration returned it was short, irregular and laborious" he proceeds and says "The same remedy was however used in the hot stage of the ensuing paroxysm, and with the usual happy effects."

Our worthy professor of the institutes, in his account of Yellow Fever, tells us, "Cold water was a most agreeable & powerful remedy in this disease; I directed it to be applied by means of napkins to the head, and to be injected into the bowels by way of glyster". In another place he says "Cold water when applied to the feet as certainly reduces the

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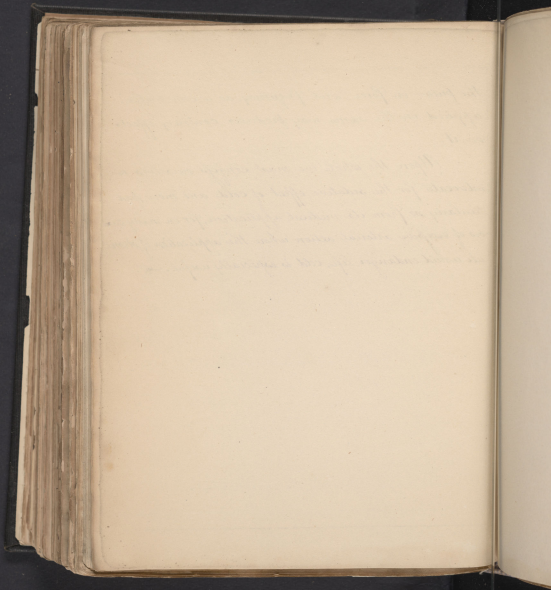
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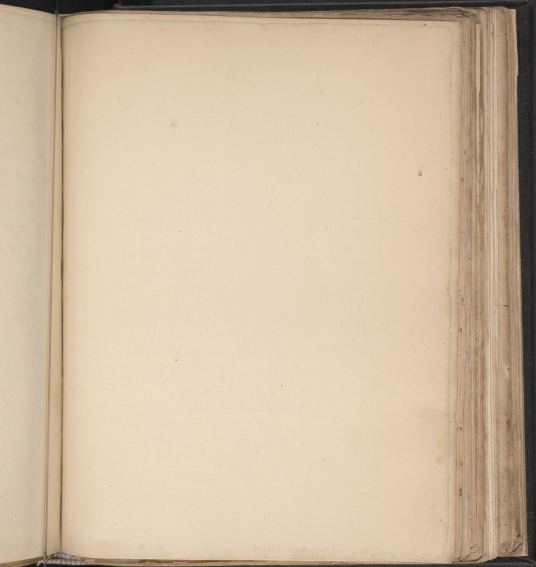
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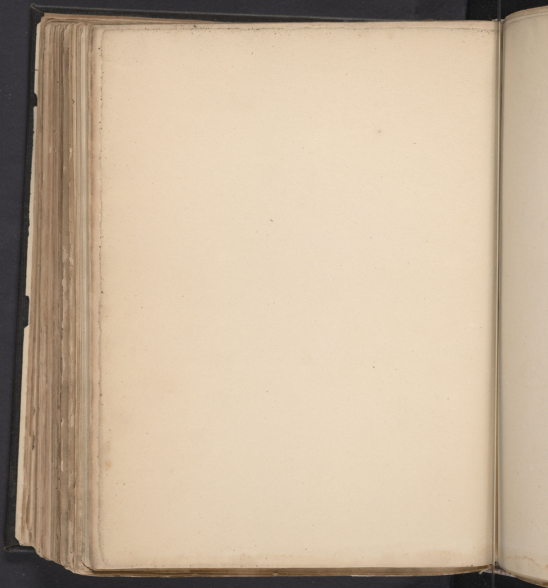
The pulse in force and frequency, as warm water, applied in the same way produces contrary effects on it.

Upon the whole, we must confess ourselves an advocate for the sedative effect of cold, and more particularly so from its medical application, for in many cases of excessive arterial action where the application of stimuli would endanger life, cold is especially useful. —









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